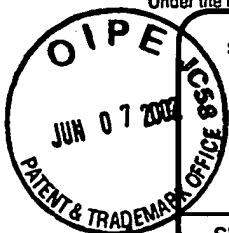


$+$

+

#9

**Complete If Known**

Application Number	10/071032
Filing Date	February 8, 2002
First Named Inventor	Richard Dennis Dyer, et al
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	A0000425-01-CFP

(use as many sheets as necessary)

Sheet	1	of	3
-------	---	----	---

[illegible][illegible]

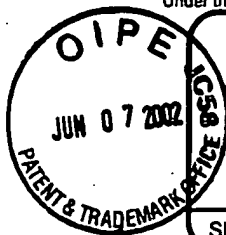
11 / 16 / 04

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/08B (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U. S. Patent and Trademark Office: U. S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.



Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 3

Complete if Known

Application Number	10/071032
Filing Date	February 8, 2002
First Named Inventor	Richard Dennis Dyer, et al
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	A0000425-01-CFP

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
INT	✓	MONTANA, John, et al, "The design of selective non-substrate-based matrix metalloproteinase inhibitors", Current Opinion in Drug Discovery & Development, 2000; 3(4), pp 353-361 .	
	✓	CLARK, Ian, et al, "Matrix metalloproteinase inhibitors in the treatment of arthritis", Current Opinions in Anti-inflammatory & Immunomodulatory Investigational Drugs, 2000; 2(1), pp 16-25 .	
	✓	CHEN, James, et al, "Structure-Based Design of a Novel, Potent, and Selective Inhibitor for MMP-13 Utilizing NMR Spectroscopy and Computer-Aided Molecular Design", J. Am. Chem. Soc., 2000, 122; pp 9648-9654 .	
	✓	DERWENT ABSTRACT, 96-068630/07, "New fused imidazole cpds. - possess inhibitory activity of adhesion molecule expression (Eng.)"	
	✓	DERWENT ABSTRACT, 93-168431/21, "New Thiazolo-pyrimidine disone derivs. for treating arteriosclerosis"	
	✓	DERWENT ABSTRACT, 91-001547/01, "New sulphur-Contg. fused pyrimidine cpds. - are endothelin and interleukin inhibitors for treatment and prevention of myocardial infarction, auto:immune diseases, etc."	
	✓	DERWENT ABSTRACT, 93271 E/44, "Cyclised pro-form of 5-flouro-uracil derivs. - are orally administered antitumour agents without side effects of parent"	
	✓	KAUL, Ravinder, et al, "2-14C-1-Allyl-3,5-diethyl-6-chlorouracil II: Isolation and Structures of the Major Sulfur-Free and Three Minor Sulfur-Containing Metabolites and Mechanism of Biotransformation", Journal of Pharmaceutical Sciences, Vol. 71, No. 8, August 1982; pp 897-900 .	
	✓	KAUL, Ravinder, et al, "Structure of a novel sulphur-containing metabolite of Acluracil (1-allyl-3,5-diethyl-6-chlorouracil)", Xenobiotica, 1982, Vol. 12, No. 8; pp 495-498 .	
	✓	KAUL, Von R., et al, "Identifizierung eines dritten S-haltigen Metaboliten von 1-Allyl-3,5-diethyl-6-chloruracil und Bildungsmechanismus der SCH - Metaboliten", Arzneim.-Forsch./Drug Res., 1982; 32(I)(6); pp 610-612 .	
TNT	✓	BROWN, et al, "The Synthesis of Some 1-Substituted Cytosine and Uracil Derivatives", J. Chem. Soc., 1972; pp 2385-2391 .	

Examiner Signature		Date Considered	11/16/04
--------------------	--	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/088 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 3

Complete if Known

Application Number	10/071032
Filing Date	February 8, 2002
First Named Inventor	Richard Dennis Dyer, et al
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	A0000425-01-CFP

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
TNT	✓	PECORARI, Piergiorgio, et al, "Synthesis And Biological Activity of Pyrimido [2,1-b] [1,3]Thiazine, [1,3]Thiazino[3,2-a]Purine And [1,2,3]Triazolo[4,5-d][1,3]Thiazino[3,2-a]Pyrimidine Derivatives And Thiazole Analogues (*)", IL Farmaco, 46 (7,8), 1991; pp 899-911 .	
	✓	DE MELO, S. J., et al, "5-flouro (3H) pyrimidine-4-ones: synthese, reactivite et proprietes pharmacologiques", Ann. Pharmaceutiques francaises, 1992, 50, n 1, pp 39-51 .	
	✓	Chem. Abstr. 1992; 117; pp 143023e - COPY TO FOLLOW De Melo et. al.	
	✓	FASKHUTDINOW, et al, Kim. Farm. Zh. 1988; 22(5); pp 557 - COPY TO FOLLOW	
	✓	Chem. Abstr. 1988; 109; pp 162901r - COPY TO FOLLOW Faskhutdinov et.al.	
TNT	✓	TOZKOPARAN, Birsen, et al, "Condensed Heterocyclic Compounds: Synthesis and Antiinflammatory Activity of Novel Thiazolo[3,2-a]pyrimidines", Arch. Pharm. Pharm. Med. Chem. 331, (Weinheim, Germany); 1998; pp 201-206 .	

Examiner Signature

[Signature]

Date Considered

11/16/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/071,032
Filing Date	February 8, 2002
First Named Inventor	Richard Dennis Dyer
Art Unit	1624
Examiner Name	Tamthom Ngo Truong
Attorney Docket Number	A0000425-01-CFP

Sheet 1 of 4

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
TNT	✓	US- 2003/0004172	01-02-2003	Harter, et al	514/260.1
	✓	US- 2003/0078276	04-24-2003	Andrianjara, et al	514/266.1
	✓	US- 2002/0193377	12-19-2002	Andrianjara, et al	514/248
	✓	US- 2003/0144274	07-31-2003	Bunker, et al	514/223.2
	✓	US- 2003/0130278	07-10-2003	Gaudilliere, et al	514/228.5
	✓	US- 2003/0216402	11-20-2003	Gaudilliere, et al.	514/251
	✓	US- 2004/0006077	01-08-2004	Gaudilliere, et al	514/227.8
	✓	US- 2004/0063673	04-01-2004	Johnson	514/114
	✓	US- 2004/0034054	02-19-2004	Wilson	514/301
	✓	US- 2004/0038973	02-26-2004	Nahra et al.	514/243
	✓	US- 2004/0039012	02-26-2004	Wilson	514/301
	✓	US- 2004/0038994	02-26-2004	Wilson	514/260.1
	✓	US- 2004/0043991	03-04-2004	Picard et al.	514/222.8
	✓	US- 4,419,356	12-06-1983	Debarre et al.	514/259.2
	✓	US- 4,421,914	12-20-1983	Okamura et al.	544/278
	✓	US- 4,383,996	05-17-1983	Oba et al.	514/259.2
	✓	US- 4,302,585	11-24-1981	Wei et al.	544/247
TNT	✓	US- 10/739,261		Bunker et al.	Filed 12-18-2003
		US-			

class/subclass

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
TNT	✓	WO 02/064599	08-22-2002	Dyer et al		
	✓	WO 02/064598	08-22-2002	Harter, et al		
	✓	WO 02/064080	08-22-2002	Andrianjara, et al		
	✓	WO 02/064572	08-22-2002	Andrianjara, et al		
	✓	WO 03/032999	04-24-2003	Bunker et al.		
TNT	✓	WO 03/033478	04-24-2003	Gaudilliere et al.		

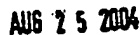
Examiner
SignatureDate
Considered

11-16-04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

(Use as many sheets as necessary)

Complete if Known

Application Number	10/071,032
Filing Date	February 8, 2002
First Named Inventor	Richard Dennis Dyer
Art Unit	1624
Examiner Name	Tamthom Ngo Truong
Attorney Docket Number	A0000425-01-CFP

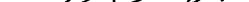
Sheet	2	of	4
-------	---	----	---

U. S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ² Number ³ Kind Code ⁴ (if known)	MM-DD-YYYY			
TNT	✓	WO 03/076417	09-18-2003	Gaudilliere et al.		
	✓	WO 2004/000322	12-31-2003	Gaudilliere et al.		
	✓	WO 2004/014384	02-19-2004	Johnson		
	✓	WO 2004/014375	02-19-2004	Wilson		
	✓	WO 2004/014365	02-19-2004	O'Brien et al.		
TNT	✓	WO 2004/014908	02-19-2004	Wilson		

Examiner Signature		Date Considered	11/16/04
-----------------------	---	--------------------	----------

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ² Applicant's unique citation designation number (optional). ³ See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ⁴ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁷ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

AUG 25 2004

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	10/071,032
Filing Date	February 8, 2002
First Named Inventor	Richard Dennis Dyer
Art Unit	1624
Examiner Name	Tanithom Ngo Truong
Attorney Docket Number	A0000425-01-CFP

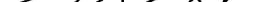
Sheet	3	of	4
-------	---	----	---

U. S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ²
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
TNT	✓	WO 2004/014916	02-19-2004	Wilson		
TNT	✓	WO 2004/014923	02-19-2004	Picard et al.		
TNT	✓	WO 96/38434	12-05-1996	Hupe et al.		

Examiner Signature		Date Considered	11/16/04
-----------------------	---	--------------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (08-03)

Approved for use through 07/31/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	10/071,032
Filing Date	February 8, 2002
First Named Inventor	Richard Dennis Dyer
Art Unit	1624
Examiner Name	Tamthom Ngo Truong
Attorney Docket Number	A0000425-01-CFP

Sheet

4

of

4

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
TNT	✓	Office Action from 10/264,764 (PC20536A) mailed 6.16.03	
	✓	LOVEJOY et al., "Crystal structures of MMP-1 and -13 reveal the structural basis for selectivity of collagenase inhibitors", Nature Structural Biology, 1999, Vol. 6, No. 3, pages 217-221 .	
	✓	MOY et al., "High-resolution Solution Structure of the Catalytic Fragment of Human Collagenase-3 (MMP-13) Complexed with a Hydroxamic Acid Inhibitor", J. Mol. Biol., 2000, Vol. 302, 671-689 .	
	✓	MITCHELL et al., "Cloning, Expression, and Type II Collagenolytic Activity of Matrix Metalloproteinase-13 from Human Osteoarthritic Cartilage", J. Clin. Invest., 1996, Vol. 97, No. 3, pages 761-768 .	
	✓	NEUHOLD et al., "Postnatal expression in hyaline cartilage of constitutively active human collagenase-3 (MMP-13) reduces osteoarthritis in mice", J. Clin. Invest., 2001, Vol. 107, No. 1, pages 35-44 .	
	✓	DAHLBERG et al., "Selective Enhancement of Collagenase-Mediated Cleavage of Resident Type II Collagen in Cultured Osteoarthritic Cartilage and Arrest with a Synthetic Inhibitor that Spares Collagenase 1 (Matrix Metalloproteinase 1)", Arthrit. & Rheum., 2000, Vol. 43, No. 3, pages 673-682 .	
	✓	BILLINGHURST et al., "Comparison of the Degradation of Type II Collagen and Proteoglycan in Nasal and Articular Cartilages Induced by Interleukin-1 and the Selection Inhibition of Type II Collagen Cleavage by Collagenase", Arthrit. & Rheum., 2000, Vol. 43, No. 3, pages 664-672 .	
	✓	BILLINGHURST et al., "Enhanced Cleavage of Type II Collagen by Collagenases in Osteoarthritic Articular Cartilage", J. Clin. Invest., 1997, Vol. 99, No. 7, pages 1534-1545 .	
	✓	HIROTA et al., "Novel Synthesis of Pyrido[3,4-d]pyrimidines, Pyrido[2,3-d]pyrimidines, and Quinazolines via Palladium-Catalyzed Oxidative Coupling", Heterocycles, 1994, Vol. 37, No. 1, pages 563-570 .	
TNT	✓	PCT International Search Report, PCT/IB02/00313 .	

Examiner Signature		Date Considered	11/16/04
--------------------	--	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.